

USSR

UDC 576.858.25.095.5

ANDZHAPARIDZE, O. G. and STEPANOVA, L. G., Moscow Scientific Research Institute of Virus Preparations

"Study of the Variability of Tickborne Encephalitis Virus. VII. Reactivity and Immunogenic Properties of the Attenuated I-40 D Strain during Oral Vaccination of Volunteers"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 70, pp 428-432

Abstract: Attenuated I-40 D strain (60,000 and 180,000 CPD₅₀) oral vaccine was administered to 19 human volunteers who had not been previously immunized. The vaccine produced no neurologic or other symptoms during the following 3 weeks; no virus was found in nasopharyngeal washings or in the blood. Specific virus-neutralizing antibodies in titers of 1:4 to 1:64 were detected after 60 days in all 19 volunteers. A second oral vaccination raised the antibody level to titers of 1:32 to 1:512. The same results were obtained for another group of seven volunteers who had been previously immunized with inactivated tickborne encephalitis virus.

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Public Health, Hygiene and Sanitation

USSR

UDC 616.916.1-097.3-056.78 (17-25)

ANDZHAPARIDZE, O. G., CHERVONSKIY, G. I., DEAYATSKOVA, R. G., and TABAROV-SKAYA, I. S., Moscow Scientific Research Institute of Virus Preparations, Sanitary Epidemiological Station, Zhdanovskiy Rayon, Moscow

"Formation of Collective Immunity To Rubella in the Population of Moscow"

Moscow, Voprosy Virusologii, No 1, Jan/Feb 71, pp 71-76

Abstract: Data and results obtained in a study of hemagglutination inhibition by rubella virus collected from blood sera of 1,237 Moscow residents ranging in age from 1 to 54 years are presented. Indices included the frequency of occurrence and levels of antibodies for different age groups and the disease incidence. Several of the requisite features of collective immunity were found which distinguish the Moscow population from other rubella foci. It was found that in the age group of 1-3 years, 16% of the subjects had rubella antibodies. The corresponding percentages for other age groups were as follows: 6-7 years, 65%; 12-13 years, 72%; 18-22 years, 95% of the subjects. Children of 3-7 years of age come down most frequently with the disease. This is a particular feature of the data on the Moscow population. Also, in Moscow, the highest rate of incidence is at an earlier age than in 1/2

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ANDZHAPARIDZE, O. G., et al., Voprosy Virusologii, No 1, Jan/Feb 71, pp 71-76

populations of other localities, with those attending nursery or elementary schools making up the bulk of patients. It was found also that men are more likely to be afflicted by the disease than are women. The percentage of seronegative subjects among pregnant women was 5.4%, which was lower than similar figures for Europe and America. It is pointed out that the epidemic situation in other regions of the country may be different because of different geographic conditions and a different population density.

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1/2 028 UNCLASSIFIED PROCESSING DATE--14-SEP70
TITLE--CHEMICAL DISINFECTION OF SOME OBJECTS IN EPIDEMIC
KERATOCONJUNCTIVITIS -U-
AUTHOR--(03)-ANDZHELOV, V.O., BELYAYEV, A.L., SKALA, L.E.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK OPHTHALMOLOGII, 1970, NO 1, PP 40-42
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--EYE DISEASE, ADENOVIRUS, INFECTIOUS DISEASE, EYE
CONTROL NO. AND--NO RESTRICTIONS
DOC. IDENT. CLAS--0001-01111
PRDXY AC-LIAISON--14/07/70 STEP 10--05/01/77
CIRC. ACQUISITION--000049037
UNCLASSIFIED

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028

UNCLASSIFIED

PROCESSING LATER--198970

CIRC ACCESSION NO--AP0049037

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. EXPERIMENTAL INVESTIGATIONS OF THE TYPE 8 ADENOVIRUS RESISTANCE SHOWED THAT IN A TITRE OF 10 PRIMER 5 150 SUR50 THE VIRUS WAS FULLY INACTIVATED WITH 0.5 AND 1PERCENT PHENOL SOLUTIONS IN 50 AND 15 MINUTES RESPECTIVELY, WHILE A 5PERCENT PHENOL SOLUTION ELIMINATED ITS INFECTUOUSNESS IN THE FIRST MINUTE. IT IS A WELL KNOWN FACT THAT INFECTED MEDICAL INSTRUMENTS AND DEVICES PLAY AN IMPORTANT PART IN THE PROPAGATION OF THE CAUSATIVE AGENT OF EPIDEMIC KERATOCONJUNCTIVITIS IN MEDICAL INSTITUTIONS. IN THIS CONNECTION SPECIAL CONDITIONS INVOLVING THE USE OF CHLORAMINE, PHENOL, HYDROGEN PEROXIDE AND POLYVINYL, PYR-OLIDONE, IODINE ALCOHOL SOLUTIONS HAVE BEEN WORKED OUT.

1/2 017 UNCLASSIFIED PROCESSING DATE--0906170
TITLE--THE EFFECT OF GRINDING CONDITIONS UPON THE TEMPERATURE IN THE
CUTTING ZONE -U-
AUTHOR-(03)-FILUMENKO, S.N., AMELCHIK, D.YE., LISOVY, G.Z.
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, STANKI I INSTRUMENT, NO 3, 1970, PP 39-40
DATE PUBLISHED-----70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--GRINDING MACHINE, METAL CUTTING, TEMPERATURE MEASUREMENT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1993/0887 STEP NO--UR/0121770/000/00370107/004
CIRC ACCESSION NO--AP0113731
UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--0900170

CIRC ACCESSION NO--AP0113731

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE TEMPERATURE ORIGINATING IN THE CUTTING ZONE IS A MOST IMPORTANT PARAMETER IN GRINDING, BUT ITS DIRECT DETERMINATION BY A THERMAL TRANSDUCER IS DIFFICULT DUE TO THE FACT THAT ITS TIME CONSTANT CONSIDERABLY EXCEEDS THE CONTACT TIME. THEREFORE THE INSTANTANEOUS CONTACT TEMPERATURE HAS BEEN CALCULATED BY MEANS OF A DYNAMIC METHOD, BASED UPON THE FACT THAT WITH UNKNOWN CONSTANT CONDITIONS OF HEAT EXCHANGE, THE TEMPERATURE OF A MEDIUM MAY BE DETERMINED ON THE BASIS OF THE READINGS OF A THERMOCOUPLE. A FORMULA HAS BEEN DEVELOPED WHEREBY IT IS POSSIBLE TO DETERMINE THE TRUE CONTACT TEMPERATURE ON THE BASIS OF THE VALUE OF THE RECORDED INCREMENT OF THERMOELECTROMOTIVE FORCE CORRESPONDING TO THE TIME OF CONTACT OF THE GRINDING DISK WITH THE PART. THE INSTANTANEOUS CONTACT TEMPERATURE DURING EXTERNAL CIRCULAR GRINDING WAS OBTAINED BY MEANS OF AN ATTACHEMENT MOUNTED ON THE GRINDING MACHINE. THE ERROR OF COMPUTING THE INSTANTANEOUS CONTACT TEMPERATURE ON THE BASIS OF THE ABOVE MENTIONED FORMULA DOES NOT EXCEED 8PERCENT.

UNCLASSIFIED

ANESTIADI, V.

MEDICINE

23 JAN 71

93

770 SOVIET SCIENCE

1. USSR

"State Medical Institute"

Moscow, Meditsinskaya Gorka, 27 (ot 70, p. 3)

Prof. V. Anestiadi -- chairman of the Scientific Council of the Academy of Sciences
Medicine

1/1

15. USSR

ANESTIADI, V., Director, Medicine State Medical Institute

"Kishinev State Medical Institute"

Kishinev, Dumitruza Mikheala, 1 (ot 70, p. 3)

Abstract: The 20th anniversary of the founding of the Kishinev State Medical Institute was marked on 28 November 1970. The Institute has a long and distinguished history. It was founded in 1950 by the decision of the Central Executive Committee of the Moldavian SSR and the Council of Ministers of the USSR. The Institute is one of the largest and most modern medical institutions in the Republic of Moldova. It has a large staff of highly qualified medical and scientific personnel. The Institute is engaged in a wide range of scientific and medical research. It has a large library and a well-equipped laboratory. The Institute is also engaged in the training of medical and scientific personnel. It has a large number of students and graduates. The Institute is a very active and productive institution. It has produced over 6,000 scientific publications.

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USSR

UDC 541.183

MARTYNOV, G. A., IVANOV, I. B., LEVINSKIY, B. N., and ANEVA, N. I.

"Statistical Theory of Monomolecular Adsorption. IV. Monomolecular Adsorption on the Crystal Surface"

Moscow, Zhurnal Fizicheskoy Khimii, Vol 47, No 1, Jan 73, pp 140-144

Abstract: Using the Arinshteyn equation, an isotherm of localized Frumkin-Fauler-Guggenheim adsorption was obtained and the limits of its applicability were analyzed. The adsorption on the surface of a real crystal was analyzed and an isotherm was obtained which was correct for the degree of filling $\tau \leq 0.2-0.3$. The relationship of τ to the attraction energy between adsorbate-adsorbent, to the ratio of molecular diameter of the adsorbate to the lattice parameters, etc. were studied. It was shown that at $\tau \leq 0.2-0.3$ it is practically impossible to distinguish the localized and nonlocalized adsorption on the basis of the adsorption isotherm.

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Acc. No: AT00-13378

Ref. Code: DR 5000

PRIMARY SOURCE: Geofizicheskiy Sbornik, Kiev, 1970, No 23,
Pp 55-60

DETERMINATION OF THE AGE OF ROCKS IN ZMEINY ISLAND
IN THE NORTH-WESTERN PART OF THE BLACK SEA
(ACCORDING TO THE DATA OF THE PALEOMAGNETIC INVESTIGATIONS)

I. A. Garkalenko, L. G. Gladchenko, K. I. Anferova, A. N. Trétyak

(Ministry of Geology, Ukrainian SSR, Trust «Dnieprogéophysics».

Institute of Geophysics, Academy of Sciences, Ukrainian SSR)

Summary

The article deals with the result of determining the age of the sedimentary rocks of Zmeiny island by the paleomagnetic method; an attempt is made to solve the problem concerning the southern continuation of the Russian platform within the limits of the Black Sea water area.

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REEL/FRAME
19770412

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AI0043978

On the basis of the literary data and using the results of the paleomagnetic determinations, a conclusion is made that the rocks of Zmefny island deposited within the limits of the Russian platform (its marginal part) and, consequently, the north-western part of the Black Sea water area up to the Odessa abyssal fracture is arranged within its limits and contains the platform deposits, beginning from the Lower Paleozoic period. .

The supposed southern border of the Russian platform is in the Sirtul George cape latitude.

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19770413

1/2 030 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--STUDY OF THE PROPERTIES OF VULCANIZATES WITH CROSSLINKS OF
DIFFERENT STRUCTURE -U-
AUTHOR--(02)--DOGADKIN, B.A., ANFIMOV, B.N. *A*
COUNTRY OF INFO--USSR
SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 2, PP 207-212
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--VULCANIZATE, POLYMER CROSSLINKING, BUTADIENE, PYRIDINE, CURING
AGENT, BROMINATED ORGANIC COMPOUND, ORGANIC PEROXIDE, TENSILE STRENGTH,
ELONGATION, FATIGUE STRENGTH
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1993/0401 STEP NO--UR/0069/70/032/002/0207/0212
CIRC ACCESSION NO--AP0113319
UNCLASSIFIED

2/2 030

UNCLASSIFIED

PROCESSING DATE--1600T70

CIRC ACCESSION NO--AP0113319

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDIES HAVE BEEN MADE ON MECHANICAL PROPERTIES OF VULCANIZATES WITH CROSS LINKS OF VARYING LENGTH, OBTAINED BY CURING OF BUTADIENE COPOLYMER CONTAINING 15PERCENT METHYL VINYL PYRIDINE WITH DICUMYL PEROXIDE (DCP), METHYLENE BROMIDE (MB), 1,2,DIBROMOETHANE (DBE), 1,3,DIBROMOPROPANE (DBP), 1,4,DIBROMOBUTANE (DBB), 1,5,DIBROMOPENTANE (DBPN) AND 1,10,DIBROMODECANE (DBD). WITH REFERENCE TO THEIR TENSILE STRENGTH, ELONGATION AND FATIGUE RESISTANCE UNDER REPEATED ELONGATION, THESE VULCANIZATES FORM THE SERIES: DCP SMALLER THAN MB SMALLER THAN DBE LARGER THAN DBP LARGER THAN DBPN LARGER THAN DBD. FATIGUE RESISTANCE UPON TWISTING WITH BENDING DOES NOT DEPEND ON THE LENGTH OF CROSS LINKS AND IS DETERMINED BY INTERNAL FRICTION. THE LENGTH OF CROSS LINKS DOES NOT AFFECT THE TEMPERATURE OF THE ELASTICITY MINIMUM AND ELASTICITY AT POSITIVE TEMPERATURES AS WELL AS THE ABRASION RESISTANCE OF VULCANIZATES.

UNCLASSIFIED

USSR

UDC 681.327.66.002.72

ATOVM'YAN, A. E., ~~ANFINOV, M. A.~~, V'YUGIN, V. A., KOLOBASHKIN, N. I., LITVAN, A. B., MAZAN'KO, B. P., AND SOLOV'YEV, V. A.

"Device for Checking Bunched Conductors"

USSR Author's Certificate No 277858, filed 27 May 69, published 6 Nov 70
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 6, Jun 71, Abstract No 6 B153 P)

Translation: A testing device containing a memory, coincidence circuit, and a display circuit is well known. This device does not provide for automation of control of bunched conductors during the manufacturing process. The proposed device for similar purpose is distinguished by the fact that it contains two ferrite cores with an open magnetic conductor, into one of which wires corresponding to the code "1" are introduced, and into the other, wires corresponding to the code "0." These are the primary coils of transformers the secondary windings of which are connected to the first input of each of two coincidence circuits respectively. The second input of each coincidence circuit is connected to the memory output, and their outputs are connected to the interrogation device connected to the conductors of the tested bunched conductors and the interrogation current control circuit. The control of the bunched conductors during the production process is automated in this way. There is 1 illustration.

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10001

SAFIN, V. F., et al., V. M., et al., et al., et al., et al.

"Equity and for Chemical Equilibrium in the System of Equilibrium"

Sb. Nauch. tr. VNIi Lyuminofovy i oshe chist. vostochno-
lected Scientific Works of the All-Union Scientific Research
Institute of Phosphorus and Extra Pure Materials), 1971, vyp. 5,
pp 172-185 (from RZh-Ekibaiya, No 7, Apr 72, Abstract No 71-72)

Translation: The authors have developed a method for the determination of conversion rates with the aid of a special device. The device consists of a rotating cylinder with a slit in its wall. The slit is illuminated by a light source. The light intensity is measured by a photometer. The authors have also developed a method for the determination of the effective rate of a reaction with the aid of a special device. The device consists of a rotating cylinder with a slit in its wall. The slit is illuminated by a light source. The light intensity is measured by a photometer.

USSR

UDC [621.357.7:669.295]:669.293

BELYAYEVA, G. I., ANFINOGENOV, A. I., ILYUSHCHENKO, N. G., FINKEL'SHTEYN, S. D.

"Influence of Melt Composition on Rate of Titanation of VN-2 Alloy"

Tr. In-ta Elektrokhemii. Ural'sk. Nauch. Tsentr. AN SSSR [Works of Institute of Electrochemistry, Ural's Scientific Center, Acad. Sci. USSR], No 17, 1971, pp 131-136 (Translated from Referativnyy Zhurnal, Khimiya, No 3, 1972, Abstract No 3 L357 by A. V. Dribinskiy).

Translation: The influence of potassium fluorotitanate, time and temperature on the rate of titanation of Nb alloy in a chloride melt, phase composition and heat resistance of the diffusion coating is studied. It is demonstrated that the heat resistance of the titanated alloy is greater than the resistance of pure Nb.

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USSR

UDC: 621.317.8

ANGAFOROVA, I. K., GELIKMAN, B. Yu.

"A Method for Accelerated Determination of the Quantitative Reliability Indices of Type MLT Resistors"

Elektron. tekhnika. Nauch.-tekhn. sb. Radiodetali (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 4 (21), pp 87-94 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5V297)

Translation: Type MLT resistors are used as an example in discussion of a method of predicting the reliability of radio components with a gradual change in the "suitability criterion" parameter during testing in a non-destructive mode of the load. A method is proposed for predicting the reliability and coefficient of aging of MLT resistors for 1000 hours of operation from the results of short-term tests for 100 hours. Resumé.

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USSR

UDC 533,933

AKhiYeZER, I. A., and ANGELEYKO, V. V., Khar'kov State University imeni
A. M. Gor'kiy

"On the Relaxation of Longitudinal and Transverse Temperature in a Plasma with
Directed Electron Movement"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 43, No 8, Aug 73, pp 1603 - 1608

Abstract: Even where the directed movement of electrons in a plasma is relatively small, it has a significant effect on the relaxation temperature conditions. In a plasma whose electrons are "at rest", the transverse and longitudinal temperatures tend to become equalized in the equilibrium state, but in a plasma in which the electrons have overall motion, these two temperatures differ in the equilibrium state, with the longitudinal electron temperature being greater by approximately the energy of directed motion. The relaxation time to reach this equilibrium state is sufficiently brief that the overall electron temperature can be considered constant during the interval.

In section 2 of the article, the Fokker-Planck coefficients of diffusion and friction are determined for a plasma in which the electrons move relative to the ions. In section 3 it is shown that the temperature relaxation within the electron component is primarily influenced by near interactions if the ion temperature is within an order of magnitude of the electron temperature, but that distance interactions (the exchange of ion-sound oscillations) predominate when the electron temperature is three or four orders of magnitude greater.

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AKHIEZER, I. A., et al., Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 43, No 2, Aug 73, pp 1603 - 1608

Sections 4 and 5 examine these two cases in detail.

The calculations in this article assume the absence of strong fields. The authors have also done studies of the effect of a strong magnetic field. These indicate that the effect of sufficiently powerful fields is to reduce or inhibit the exchange of energy between the longitudinal and transverse degrees of freedom.

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USSR

AKHIYEZER, I. A. and ANGELEYKO, V. V., Kharkov State University imeni A. M. Gorkiy

"Nonlinear Variation of Phase Velocity and Stabilization of Plasma Oscillations"

Moscow, Pis'ma Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 14, No 7, 5 Oct 71, pp 434-436

Abstract: Conventional investigations of plasma turbulences are based on the assumption that the source of energy is provided by Čerenkov type excitations, and the sink of energy is represented by inelastic collisions (Landau damping).

The present paper suggests yet another possible mechanism: change in phase velocity due to nonlinear effects, leading to a high level of turbulent oscillations -- the state of stationary turbulence.

As an example, ionic-acoustic oscillations in a strongly magnetized plasma with hot electrons and a low-density ion beam along the magnetic field are examined. Starting with the dispersion equation for low-frequency oscillations, the plasma dielectric constant (electric susceptibility) is computed, leading to the determination of the magnitude of phase velocity.

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USSR

AKHIEZER, I. A. and ANGELEYKO, V. V., Pis'ma Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 14, No 7, Oct 71, pp 434-436

With an increase in the level of turbulent fluctuations, the phase velocity reaches a value at which Čerenkov type excitations are no longer possible, further increase ceases, and the plasma passes into a stationary state with oscillations at a considerably lower level. This situation could take place, for example, in hydrogen plasma with a particle density of 10^{14} cm^{-3} , particle temperature for electrons of about 10^6 degrees, and ions -- 10^4 degrees, placed in a magnetic field B_0 of about 5×10^5 gauss, with a potassium ion beam passing through it having a beam particle density of 10^{11} to 10^{12} cm^{-3} and a beam velocity of about 10^7 cm/sec .

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1/2 025 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--FREQUENCY MODULATED TRANSISTORIZED RC OSCILLATOR -U-

AUTHOR-(03)-VASINOV, YU.P., ANGELOV, A.I., PRODANOV, I.F.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, RADIOTEKHNIKA, VOL 25, NO 2, 1970, PP 69-74

DATE PUBLISHED-----70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--ELECTRONIC OSCILLATOR, TRANSISTORIZED CIRCUIT, VOLT AMPERE
CHARACTERISTIC, ELECTRIC INVERTER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REF/EXAM--1006/CLASS

STEP NO--08/0108/10/025/002/0059/0014

CIRC. APPROVAL NO--08-13-192

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0134002

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN EXPERIMENTAL CHECKING OF THE THEORETICAL EXPRESSIONS FOR THE AMPLITUDE AND PHASE FREQUENCY CHARACTERISTICS OF A LOADED PHASE INVERTING BRIDGE WAS CARRIED OUT. THE INVESTIGATED TRANSISTORIZED RC OSCILLATOR INCORPORATES TWO BRIDGE TYPE RC PHASE INVERTERS. THE FUNCTIONS OF THE FOUR TRANSISTORS ARE AS FOLLOWS: THE FIRST TRANSISTOR WITH COMMON EMITTER AND CONTROLLED NEGATIVE FEEDBACK FUNCTIONS AS AN AMPLIFIER, THE SECOND AND THE THIRD TRANSISTORS FUNCTION AS BRIDGE TYPE PHASE INVERTERS, AND THE FOURTH TRANSISTOR FUNCTIONS AS AN EMITTER FOLLOWER. THE LATTER HELPS TO REDUCE INTERACTION BETWEEN STAGES OF TRANSISTORS ONE AND THREE. THIS OSCILLATOR WAS BUILT WITHOUT A NONLINEAR INERTIA ELEMENT, SO AS TO PROVE THE POSSIBILITY OF AMPLITUDE COMPENSATION IN AN OSCILLATOR WITH LOADED BRIDGES. THE OSCILLATOR FREQUENCY CAN BE CONTROLLED WITH EITHER A RESISTANCE TYPE OR CAPATIVE TYPE TRANSDUCER. THE FUNDAMENTAL ADVANTAGES OF THIS FM RC OSCILLATOR ARE: 1. FREQUENCY DEVIATION IS MORE THAN 100PERCENT. 2. FREQUENCY CONTROL IS ACHIEVED BY A SINGLE ELEMENT. 3. FREQUENCY DRIFT DEPENDS ON IMPERFECTION OF RESISTORS AND CAPACITORS OF THE PHASE INVERTERS AND IS RATHER SMALL. 4. THE PARASITIC AM DOES NOT EXCEED 1.5PERCENT FOR FREQUENCY DEVIATION OF 100PERCENT. 5. THE POSSIBILITY OF USING THERMAL NONLINEAR ELEMENTS WITH SHORT TIME CONSTANT TO STABILIZE THE OUTPUT VOLTAGE.

UNCLASSIFIED

USSR

UDC: 621.373.421.15

MARINOV, YU. P., ANGELOV, A. I., PRODANOV, I. F.

"Frequency-Modulated Transistorized RC-Oscillator"

Moscow, Radiotekhnika, Vol 25, No 2, 1970, pp 69-74

Abstract: An experimental checking of the theoretical expressions for the amplitude and phase-frequency characteristics of a loaded phase-inverting bridge was carried out. The investigated transistorized RC-oscillator incorporates two bridge-type RC-phase inverters. The functions of the four transistors are as follows: the first transistor with common emitter and controlled negative feedback functions as an amplifier, the second and the third transistors function as bridge-type phase inverters, and the fourth transistor functions as an emitter follower; the latter helps to reduce interaction between stages of transistors one and three. This oscillator was built without a nonlinear inertia element, so as to prove the possibility of amplitude compensation in an oscillator

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MARINOV, YU. P., et al, Radiotekhnika, Vol 25, No 2, 1970, pp 69-74

with loaded bridges. The oscillator frequency can be controlled with either a resistance-type or capacitive-type transducer.

The fundamental advantages of this FM ml-oscillator are:
1. Frequency deviation is more than 100 percent. 2. Frequency control is achieved by a single element. 3. Frequency drift depends on imperfection of resistors and capacitors of the phase inverters and is rather small. 4. The parasitic AM does not exceed 1.5 percent for frequency deviation of 100 percent. 5. The possibility of using thermal-nonlinear elements with short time constant to stabilize the output voltage.

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Acc. Nr: **AP0044156**

Ref. Code: UR 0244

PRIMARY SOURCE: Voprosy Pitaniya, 1970, Vol 29, Nr 1,
pp 20-23

CHANGES IN THE ACTIVITY OF SOME CARBOHYDRATE METABOLISM ENZYMES
IN SCORBUTIC GUINEA PIGS

L. P. Mitev, M. S. Kharizanova, A. M. Angelov, A. M. Krushkova,
(Plovdiv, Bulgaria)

Summary

The activity of the aldolase, glucose-6-phosphate-dehydrogenase, lactate-dehydrogenase, sorbitol-dehydrogenase and aspartate-aminotransferase enzymes were investigated in the liver and kidneys of scorbutic guinea pigs. A tendency towards reduced activity of nearly all enzymes was observed, except for that of sorbitol-dehydrogenase which was rising. The author associates these changes with diminished glucose cleavage in the course of glycolysis and pentose cycle, this being compensated for by the scorbutic organism by means of the glucose conversion into fructose through the sorbitol-dehydrogenase reaction.

REEL/FRAME
19770637

UDC 534.232.45-8

USSR

GAL'PERINA, A.N., ANGELOV, N.A.

"Choice Of Operating Conditions Of Packet Piezoelectric Transducer For Technological Application"

Tr. VNII tokov vysok. chastoty (Works Of The All-Union Scientific-Research Institute Of High-Frequency Currents), 1970, Issue 11, pp 289-295 (from RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2A426)

Translation: The dependence is considered of the nonlinearity of the resistance losses of a packet piezoceramic transducer, on the specific construction and the conditions of its use. In particular, a transducer is investigated which consists of two piezoceramic rings from the TsTS-19 [expansion unknown]. The transducer operated with forced cooling in a regime of radiation in air. There was investigated how a change of the supply voltage and the constriction force at a bolted-on connection [v boltovom soyedinenii] influence the magnitude of the dielectric resistance and mechanical losses, and also the mechanical quality at the resonance frequency. The effect is considered of the load character on the efficiency and effectiveness of the transducer. On the basis of an analysis of experimental data, conclusions are drawn with respect to the operating conditions of the transducer. 5 ill. 5 ref. N.B.

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1/2 022 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--TWO PRONG PI POSITIVE P INTERACTIONS AT 2.34 GEV,C -U-

AUTHOR--(05)-ANGELOV, N.S., GRAMENITSKIY, I.M., KANAZIRSKIY, KH.M.,
MOISEYEV, A.M., PROKES, A.
COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(3), 613-28

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--MESON INTERACTION, HYDROGEN BUBBLE CHAMBER, PION PROTON
INTERACTION, PION PION INTERACTION, EXCITATION CROSS SECTION, QUANTUM
RESONANCE PHENOMENON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/1062

STEP NO--UR/0357/70/011/001/06.13/0628

CIRC ACCESSION NO--AP0110752

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--180CT70
CIRC ACCESSION NO--AP0110752
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS ARE PRESENTED OBTAINED IN
THE ANAL. OF 17,000 2-PRONG PI POSITIVE P INTERACTION EVENTS SELECTED
FROM 150,000 STEREOPHOTOGRAPHS TAKEN IN A 40-CM LIO. H CHAMBER
IRRADIATED BY A SEPD. BEAM OF 2.34-GEV-C PI POSITIVE MESONS. THE
PRODUCTION CROSS SECTIONS AND PARAMETERS ARE DETD. FOR THE P POSITIVE, N
POSITIVE POSITIVE SUB1238, AND N POSITIVE 1688 RESONANCES. THE
MECHANISM OF THE PRODUCTION OF THESE RESONANCES IS STUDIED IN DETAIL.
THE CROSS SECTION OF THE PI POSITIVE PI POSITIVE INTERACTION IS INFERRED
FROM THE PI POSITIVE P YIELDS PI POSITIVE PI POSITIVE N REACTION BY THE
CHEW LOW METHOD. FACILITY: OB'EDIN. INST. YAO. ISSLED., DUBNA,
USSR.

UNCLASSIFIED

Epidemiology

UDC 616.981.49-02

USSR

ANGELOVICH, S. M., Chair of Infectious Diseases, Chelyabinsk
Medical Institute

"Clinical Characteristics of Mixed Food Poisonings of Salmonella
Etiology"

Minsk, Zdravookhraneniye Belorussii, No 2, 1971, pp 53-55.

Abstract: Observation of 78 persons suffering from food poisoning combined with protozoan or helminth infections or with dysentery showed the main clinical forms to be gastroenteric, gastroenterocolitic, and enterocolitic. In most cases the course was mild to moderately severe. The great majority of patients complained of abdominal pains and temperatures as high as 39°C or more. Seventy suffered from liquid stools sometimes admixed with mucus (20) or with mucus and blood (6). Leukocytosis was observed in 16, leukopenia in 23, and aneosinophilia in 13. The ESR was rapid in 22, including 2 in whom the disease was asymptomatic. The liver was enlarged in 14.

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Acc. Nr. AP0015147

Abstracting Service:
CHEMICAL ABST.

Ref. Code

5-76 2R0138

91306e Change in the surface temperature of rubbers under atmospheric conditions. Angert, L. G.; Dubok, N. N. (Nauch.-Issled. Inst. Rezin. Prom., Moscow, USSR). *Kauch. Rezina* 1970, 29(1), 22-5 (Russ). Black and white elastomers were tested in Moscow (moderate climate) during the month of July in order to evaluate the total daily variation in surface temp. and its dependence on meteorol. factors. Overheating of elastomers depended on (all other conditions being equal) the color of the surface, the solar radiation flux, and cloudiness of the sky. The surface temps. of black and white elastomers in sunlight were 25 and 16°, resp., above air temp. at noon. Two equations were derived for the calcul. of temp. changes on elastomer surfaces. The calcul. temps. were in good agreement with exptl. results. CKJR 1

REEL/FRAME

13780047

1/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EFFECT OF STRESS RELAXATION IN RUBBERS UNDER ATMOSPHERIC CONDITIONS
ON THEIR OZONE CRACKING -U-
AUTHOR-(02)-ANGERT, L.G., DUBOK, N.N.
COUNTRY OF INFO--USSR
SOURCE--KAUCH. REZINA 1970, 29(3), 19-21
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--STRESS RELAXATION, OZONE, SYNTHETIC RUBBER, ATMOSPHERIC
CONDITION, ELONGATION/(U)SK13 SYNTHETIC RUBBER, (U)SKMS30AKN SYNTHETIC
RUBBER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY PEEL/FAME--1997/0530 STEP NO--UR/0138/70/029/003/0019/0021
CIRC ACCESSION NO--AP0119449
UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119449

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AV. RATE OF STRESS RELAXATION (SIGMA SUBT-SIGMA SUBO) OF SYNTHETIC RUBBERS (SKI-3, SKMS-30ARM, OR NAIRIT) IN THE NONSTATIONARY SIGMA SUBT-SIGMA SUBO RANGE IS APPROX. 2 TIMES LARGER IN OPEN STORAGE THAN INSIDE A BUILDING. THE TIME TAKEN BY A SAMPLE UNDER CONST. STRESS TO CRACK (T) IS LOWER THAN UPSILON FOR SAMPLES UNDER CONST. ELONGATION (I.E. WHEN SIGMA SUBT-SIGMA SUBO DECREASES); FOR SKI-3 THIS DIFFERENCE IS 60-67PERCENT. IT IS PROPOSED THAT THE SIGMA SUBT-SIGMA SUBO DECREASE IMPROVES STABILITY OF RUBBER TOWARDS O SUB3 CRACKING. FACILITY: NAUCH.--ISSLED. INST. REZIN. PROM., MOSCOW, USSR.

UNCLASSIFIED

USSR

UNIT: G01.373:534.143.4

PARHENDEYEV, V. I., GOLCHENKOVA, R. M., KLITZAT, V. F., ROZNOV, E. A.,
ANGERS, N. B.

"A Method of Making Manganese Mn_2O_3 Crystals of 99.9% Purity"

USSR Article Published in Chem. Abstr., Vol. 81, No. 12, published in 1975
(from Chem. Abstr., Vol. 81, No. 12, Abstract No. 6184-11)

Translation: This Article Describes the Method of Making
monocrystalline Mn_2O_3 crystals. As a starting material
of the process, the Mn_2O_3 crystals are used, which are
annealed in a vacuum furnace at a temperature of 1100°C
for 2-3 hours. The crystals of 99.9% purity are obtained.
1005-1125/75. The crystals are used for the production
of the crystals of 99.9% purity.

1/1

USSR

UDC 621.373.006:621.317

ANCERT, N. B., BUTYAGIN, O. F., ZORENKO, V. P., KULYAVTSOVA, A. P., KUSENIK, V. R., RUSTAMOV, S. R.

"Phase Matching Angles and Temperatures for Lithium Metaniobate Crystals with Different Stoichiometry"

V sb. Kvant. elektronika (Quantum Electronics--collection of works), Moscow, No 5, 1971, pp 128-129 (from RZh-Radiotekhnika, No 1, 1972, Abstract No 19454)

Translation: The results of measuring the phase matching angles and temperatures for generation of the second harmonic in LiNbO_3 crystals with stoichiometric coefficient from 0.9 to 1.2 are discussed. A helium-neon laser ($\lambda = 632.8$ nm) and a YAG: Nd^{3+} garnet laser ($\lambda = 1064$ nm) were used for the measurements. The results obtained are in good agreement with the calculated results. There are 2 illustrations and a 6-entry bibliography.

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- 96 -

USSR

UDC 612.858.4.015.3.014.45.014.6

ANICHIN, V. F., and MALYSHEV, N. M., Chair of Otorhinolaryngology, Leningrad
Sanitary Hygiene Medical Institute

"The Effects of Some Drugs on the Nature of Changes Occurring in the Spiral
Organ During Exposure to High Frequency Sounds"

Moscow, Vestnik Otorinolaringologii, No 2, Mar/Apr 73, p 114

Abstract: Experiments were conducted on guinea pigs to investigate the effects of sodium amytal, nicotinic acid, and caffeine on the changes induced in the cochlear receptors by a sound of 4,000 cyc/sec and 100 db, to which the animals were exposed for 3 and 6 hrs. The evaluation was performed on the basis of nucleic acid and glycogen metabolism and certain specific reactions of cell nuclei. The results indicate that sodium amytal magnifies somewhat the traumatic action of the high frequency sound and nicotinic acids attenuates it, while caffeine exerts no effect.

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USSR

UDC 613.164+617-001.34](049.3)

MLECHIN, B. M., professor, and ANICHIN, V. F., docent (Reviewers)

Shum i Shumovaya bolezn' (Noise and Noise Disease) by Andreyeva-Galimova, Ye. E., Alekseyev, S. V., Kadyskin, A. V., and Suvorov, G. A., Leningrad, Izd-vo Meditsina, 1972, 303 pp

Moscow, Vestnik Otorinolaringologii, No 1, Jan/Feb 73, pp 100-103

Abstract: On the basis of literature data and their original research, the authors discuss, in Chapter I, the physical properties and hygienic aspects of various industrial noises as well as methods of measuring the parameters and establishing regulation standards. In Chapter II they present methods of investigating the effects of industrial noise on the human body and describe the necessary equipment. In Chapter III the effects of noise on the individual systems and organs of the human body are discussed. Chapter IV deals with the functional deterioration of the nervous system as a result of exposure to steady and pulsating noise. Chapter V presents the clinical picture of the noise disease with its multiple, diverse syndromes. In the last chapter, the authors make recommendations concerning routine examinations of workers and suggest preventive measures that should be taken in order to reduce noise production and improve sound and vibration proofing. The book has 30 tables of

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- 100 -

USSR

MLECHIN, B. M. and ANICHIN, V. F. (Reviewers), Vestnik Otorinolaringologii, No 1, Jan/Feb 73, pp 106-108

text, many photographs, drawings, graphs, and tables, and a bibliography with 414 references. Although the reviewers object to an overabundance of numerical data and an occasional unconventional anatomical terminology, they recommend the book to otolaryngologists.

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USSR

UDC 612.85.015.14.014.45

ANICHIN V. F., Candidate of Medical Sciences, Chair of Otorhinolaryngology, Leningrad Sanitation Hygiene Medical Institute, and Laboratory of Evolutionary Morphology, Institute of Evolutionary Physiology and Biochemistry imeni I. M. Sechenov, USSR Academy of Sciences, Leningrad

"Alteration of the Activity of Monophosphoesterases in the Auditory Analysor After Exposure to 4,000 Hz Sounds of Varying Duration"

Moscow, Vestnik Otorinolaringologii, No 5, Sep/Oct 71, pp 42-46

Abstract: Twenty six guinea pigs were exposed to sounds of 4,000 Hz, 100 decibels, for durations of 0-12 hours. Immediately after completion of this stimulation, the animals were decapitated, microscopic slides of the cochlea, medulla, and auditory cortex were prepared, and they were analyzed for monophosphatase activity according to Gomori's method. Alkaline monophosphatase activity was depressed in all areas. However, the organ of Corti, which normally has a high alkaline phosphatase activity, proved most resistant, and a marked reduction in this activity was observed only after 9-12 hours of stimulation. In the cochlear nuclei and in the auditory cortex, enzymatic activity decreased after a shorter period of stimulation. Glia cells were more resistant than neurons. After 9-12 hours of stimulation, there were very

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USSR

ANICHIN, V. F., Vestnik Otorinolaringologii, No 5, Sep/Oct 71, pp 42-46

few open blood vessels in the nervous tissue, suggesting either absence of enzymatic activity in the endothelial cells or vascular spasm. The activity of the acid monophosphatase, which is present in the organ of Corti only, decreased at a very fast rate. Since that enzyme is associated with lysosomes which control intracellular metabolism, it appears that prolonged auditory stimulation accelerates intracellular metabolism.

2/2

- 60 -

USSR

UDC 616.282.2-073.48-092.9

ANICHIN, V. F., Leningrad Institute of Sanitation, Hygiene, and Medicine and
Institute of Evolutionary Physiology and Biochemistry imeni I. M. Sechenov,
Academy of Sciences USSR

"Change in the Glycogen Content of the External Hair Cells in the Organ of
Corti Under the Influence of High-Frequency Sound of Different Durations"

Kiev, Zhurnal Ushnykh, Nosovykh i Gorlovykh Bolezney, No 4, 1971, pp 12-16

Abstract: The external hair cells in the organ of Corti of guinea pigs are normally rich in glycogen, the amount increasing toward the apical end of the cochlea. There is no glycogen in the internal hair cells. Exposure of the animals to sound at a frequency of 4000 Hz and intensity of 100 db for 1 to 3 hours reduced the amount of glycogen in the external hair cells in the basal portions of the cochlea and altered their shape (by rounding them). The glycogen content of the apical portions of the cochlea, however, did not decrease. Six hours of exposure raised the glycogen level in the basal portions of the cochlea while lowering it in the apical portions. But after more prolonged exposure (9 to 12 hours), the glycogen level rose in the basal portions but dropped in the apical portions.

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USSR

UDC 612.85.012.4

ALEKSEYEV, S. V., and ANICHIN, V. F., Sanitary Hygiene Medical Institute, Leningrad

"The Mechanism of Action of Various Frequency Noises on the Auditory Receptor"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 8, Aug 71, pp 25-28

Abstract: The hair cells of the organ of Corti were investigated in guinea pigs exposed for 30 minutes to 100 db noise of broad frequency range (white noise) and noise of four different octave ranges with geometrical averages of 250, 2,000, 6,000, and 12,000 hz. Changes in the concentration of RNA and in the size of the nuclei were observed only in the outer hair cells. The lowest frequency noise produced a slight decrease in RNA concentration and a small increase in nuclear volume almost throughout the length of the basilar membrane. With increasing wave frequency, these changes were shifted progressively more toward the basic portion of the cochlear duct, and they were more pronounced. The white noise produced changes irregularly distributed along the whole basilar membrane. It is concluded that the method of measuring RNA concentration and nuclear volume broadens experimental possibilities of studying the pathogenic effects of noise.

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USSR

UDC 612.858.014+547.466+621.386.8

ANICHIN, V. F., Institute of Evolutionary Physiology and Biochemistry imeni I. M. Sechenov, Academy of Sciences USSR, Leningrad and Leningrad Sanitary Hygiene Medical Institute

"Shift in the Rate of Incorporation of Methionine S³⁵ in the Receptor and Neurons of the Auditory Analysor Under the Influence of Sound (Histo-Autoradiographic Study)"

Moscow, Doklady Akademii Nauk SSSR, Vol 195, No 1, 1970, pp 242-245

Abstract: Shifts in the methionine S³⁵ content in various parts of the auditory analysor under the influence of a sound stimulus were studied in guinea pigs. Methionine was introduced intra-abdominally in a dose 0.5μC/g body weight. The guinea pigs were then subjected to sound of 4,000 Hz and 100 db for 1, 3, 6, 9, and 12 hours. After the action of the sound, the number of tracks was reduced in all branches of the auditory system. The data obtained indicate that methionine S³⁵ was present in all parts of the auditory analysor but that the content differed. Prolonged action of sound (12 hours) produced a sharp drop in protein synthesis in all parts of the auditory system.

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AP0034673

(C)

BIOLOGICAL ABSTRACTS

4A 0092

8008. ANICHIN, V. P. Leningrad Sanit.-Hyg. Med. Inst., Leningrad, USSR. K metodike avtoradiograficheskogo issledovaniya peripendikulogo labirinta ul'tki. [Technique for the autoradiographic study of the membranous labyrinth of the cochlea.] ZH USHN NOG GORL. POLNIZ. 29(4):20-24, illus., 1969. [Biol. sum.] Methionine, labelled with radioactive sulfur S^{35} , was injected intraperitoneally into 12 albino mice. The mice were killed at times 0.5, 1, 2, 5, 12 and 24 hr after injection. The cochleae were isolated and total phase preparations were made from the basilar membrane, as well as preparations from the vascular strip. The resulting preparations were investigated by the autoradiographic method. Within 5 hr after injection, methionine labelled with S^{35} no migration activity was established in the vascular strip and in the region of the internal hair cells, and migration activity was noted in the region of the external hair cells. The highest activity of methionine labelled with S^{35} was observed within 1, 2 and 6 hr after it was injected and all the investigated fragments of the membranous labyrinth of the cochlea. After 24 hr it became negligible in the region of the hair cells and was not detected at all in the vascular strip. Within 24 hr methionine labelled with S^{35} was completely eliminated from the cochlea.

11/11/74

Organ and Tissue Transplantation

USSR

UDC 612.17:612.2157-089.843

PRITYAK, A. A., GERASIMENKO, N. I., ANICHKOV, M. N., VIGDORCHIK, I. V.,
AVERBAKH, M. M., DOBKIN, V. G., DEMIDOV, B. S., VIGDORCHIK, S. I., PAKHOMOVA,
Z. I., PETUKHOVA, I. V., VAKSMAN, B. M., CALAYEVA, V. N., and KOZLOV, P. D.

"Use of an Isolated Heart-Lung Preparation in Experimental Transplant Surgery"

Moscow, Voenno-Meditsinskiy Zhurnal, No 2, 1971, pp 22-23

Abstract: Brief preliminary report on the use of an isolated heart-lung preparation with a working heart in more than 200 experiments on dogs, swine, calves, and sheep. The isolated heart-lung preparation is connected by special cannulas to the peripheral vessels of the recipient's systemic circulation. The isolated lungs inspire an air mixture under hyperventilation conditions. The parameters of electrical activity of the donor's and recipient's hearts, recipient's brain, hemodynamics, biochemical changes in blood, external respiratory function, blood gases, morphology of the tissues of the isolated heart-lung preparation (in various stages of survival) and of the recipient (following biological oxygenation) are investigated. The experiments showed that the physically stabilized heart-lung preparation when used as a biological oxygenator remains viable and ensures good lung and heart function for 10 to 15 hours. It is capable of adjusting automatically to the recipient's circulation and without traumatizing the formed elements

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USSR

PRIYMAK, A. A., et al., Voenno-Meditsinskiy Zhurnal, No 2, 1971, pp 22-23
of the blood maintains the necessary blood flow rate.

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UDC: 669.15.018.29:539.389.2:536.4

USSR

IL'IN, V. P., PADUN, A. N., ANIKAYEV, V. A., URSHANSKIY, A. M., KULALAYEV, Yu. A., SABKO, V. F.

"Study of Thermal Stability of Certain Wear-Resistant Metals"

Progressiv. Sposoby Svarki, Novyye Materialy i Konstruktsii v Svaroch. Proiz-ve [Progressive Methods of Welding, New Materials and Structures in Welding Production -- Collection of Works], Izhevsk, 1973, pp 54-55 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 81509, by V. Bochkareva).

Translation: The thermal stability of two groups of wear-resistant steels was studied. In group I, the C content varied from 0.16 to 0.89%, while the content of the other elements remained constant as follows (in %): Cr 4.0, W 1.0, V 1.0, Mo 10.0. In the steels of group II, the content of C varied from 0.4 to 1.0%, the content of Cr from 5.0 to 10.0%, with the contents of the other elements (in %): Mn 0.35, Si 0.65, W 10.0, V 0.8, Mo 1.4, Ti 0.5. A regression equation is produced to estimate the influence of C and Cr content and tempering temperature on thermal stability of steels of group II. Analysis of this equation shows that within the limits studied, C significantly

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USSR

Il'in, V. P., Padun, A. N., Anikayev, V. A., Urshanskiy, A. M., Kulalayev, Yu. A., Sabko, V. F., Progressiv. Sposoby Svarki, Novyye Materialy i Konstruktsii v Svaroch. Proiz-ve, Izhevsk, 1973, pp 54-55.

reduces, Cr increases the resistance to thermal cracking. The combined influence of C and tempering temperature greatly decreases the thermal stability of group II steels. For the steels of group I, it was established that hardness in the state after casting is increased with increasing C content, while resistance to formation of hot cracks decreases.

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USSR

ANIKEICH, A. A. and GRIBOV, A. B.

"Approximation of Elements of the Matrix of the Sum of the Corresponding Components of Two Vectors"

Issled. Operatsiy i Stat. Modelir. [Operations Research and Statistical Modeling], No 1, Leningrad University Press, 1972, pp 3-9 (Translated from Referativnyy Zhurnal Kibernetika, No 10, 1975, Abstract No 10V495)

Translation: Number matrix $\|a_{ij}\|$ is given. The problem is to find the number x_i and y_j , minimizing

$$\lambda = \max_{i,j} |a_{ij} - x_i - y_j|.$$

This problem, arising from the requirement for economic storage of a matrix in computer memory, can be solved as a problem of linear programming. A specialized method is suggested which is more convenient for machine realization.

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Acc. Nr.

AP0051523

Abstracting Service:

CHEMICAL ABST. 4/70

Ref. Code

UR 0136

81750f Reduction of tungsten hexachloride with hydrogen in a fluidized bed. Zelikman, A. N.; Anikeev, A. I. (USSR). *Tsvet. Metal.* 1970, 43(1), 58-61 (Russ). WCl₆ is recommended as starting material for the production of finely powd. pure W because of its ease of purification due to its low b.p. The redn. is done in a fluidized bed of WCl₆ by H at 800-900°. Both gases are carried by a stream of purified, dry Ar. H is purified over Cu shavings at 600° and dried over P₂O₅. Oxychlorides are removed from WCl₆ by evapn. at 200-20° in pure Ar, and WCl₆ is then distd. at 300-50°. The W powder obtained by this method and collected in a dust chamber above the reaction zone contains <0.01% O. The parameters and optimum conditions of the redn. are given. A. P. Mueller.

REEL/FRAME
19811735

USSR

UDC 534

ANIKEYEV, G. I., SIL'VESTROV, E. YE.

"Nonstationary Almost Periodic Oscillations of a Gyroscopic Rotor"

V sb. Vibroizolvatsiya mashin i vibrozashchita cheloveka-operatora (Vibration Insulation of Machines and Vibration Protection of the Human Operator--collection of works), Moscow, Nauka, 1973, pp 108-113 (from RZh--Mekhanika, No 6, Jun 73, Abstract No 6A136)

Translation: A study was made of nonstationary almost periodic oscillations of a gyroscopic rotor on transition of it through the autooscillation zone as a result of variation of the angular rotation rate. The presence of nonstationary almost periodic conditions of only one type is demonstrated in which along with the oscillations with variable frequency there are autooscillations with one of the natural frequencies also varying in time. A study was made of the effect of the initial conditions and the rate of passage through the zone of autooscillations with linear variation of the rotation rate of the rotor.

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USSR

UDC 534.014

ANIKEYEV, G. I., SIL'VESTROV, E. YE. (Moscow)

"Nonlinear Oscillations of a Rotor With Account Taken of the Gyroscopic Effect of the Disk"

Moscow, Mashinovedeniye, No 1, 1971, pp 3-10

Abstract: The article deals with the self-oscillation of a flexible rotor, with account taken of the gyroscopic aspects on the basis of a weightless overhung shaft with an unbalanced disk on the free end. The oscillation of the system is described by four nonlinear differential equations. First-approximation equations are obtained for the amplitudes and phases in a case without resonance. It is shown that with the exception of purely forced oscillation, the system has only one almost-periodic regime. An investigation is made of the stability of the existing regimes. 3 illustrations, 3 bibliographic entries.

1/1

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1/2 030 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--ULTRASONIC DEFECTOSCOPY OF GRILLED TUBES -U-

AUTHOR--(05)-PRONYAKIN, V.T., ANIKEYEV, YA.F., GORSHKOV, A.V., LOVYAKIN,
YE.M., NEMIROVSKIY, M.G. *A*
COUNTRY OF INFO--USSR

SOURCE--SVERDLOVSK, DEFECTOSKOPIYA, NO. 1, 1970, PP 16-19

DATE PUBLISHED-----70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., METHODS AND EQUIPMENT,
MATERIALS
TOPIC TAGS--NONDESTRUCTIVE TEST, QUALITY CONTROL, ULTRASONIC INSPECTION,
CERAMIC MATERIAL, PIEZOELECTRIC MATERIAL/(U)TSTS19 CERAMIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PRCAT REL/FRAME 100370170

STEP NO 1007000170/00070017001700170017

CIRC ACCESSION NO--AP0100670

UNCLASSIFIED

2/2 000

UNCLASSIFIED

PROCESSING DATE 10SEP70

CIRC ACCESSION NO--AP0100670

ABSTRACT/EXTRACT--(U) CP 3- ABSTRACT. ALTHOUGH MANY DEFECTOSCOPIC DEVICES HAVE BEEN SUCCESSFULLY USED FOR QUALITY CONTROL OF THIN WALLED TUBES, THEIR USE FOR THE CONTROL OF GRILLED TUBES IS IMPOSSIBLE BECAUSE OF THE INTERFERING PULSES REFLECTED FROM THE RIBS OF THE TUBE. EXPERIMENTAL STUDY OF HOW THE AMPLITUDES OF THE TRANSMITTED AND REFLECTED ULTRASONIC PULSES ARE AFFECTED BY THE RIPPED SECTION OF THE TUBE HAS SHOWN THAT A DIFFERENCE IN THE INTERFERENCE EFFECTS OF THE TRANSMITTED AND REFLECTED SIGNALS IS OBSERVED DEPENDING ON THE SHAPE OF THE RIBBING. AS A RESULT, THIS FACTOR PREDETERMINES THE CHOICE OF CONTROL METHOD. THIS PAPER DESCRIBES EXPERIMENTS OF DEFECTOSCOPIC CONTROL OF THIS TUBING TYPE USING PIEZOELECTRIC ELEMENTS MADE OF THE TST-19 CERAMIC WITH RESONANT FREQUENCIES FROM 2 TO 5.25 MHZ. IT WAS FOUND THAT DEFECTS WITH A DEPTH OF MORE THAN 25 MICRONS ON THE INNER SURFACE OF THE TUBES UNDER THE RIBBING WERE RELIABLY RECORDED; SENSITIVITY TO DEFECTS ON THE OUTER SURFACE WAS MUCH LOWER, WITH A DEPTH THRESHOLD OF 60 MICRONS. THE AUTHORS EXPRESS THEIR GRATITUDE TO P. I. VIT'KO, WHO ASSISTED IN THE EXPERIMENTS.

UNCLASSIFIED

USSR

UDC 546.26+66.022.4

YELYUTIN, V. P., ANIKHEEV, YE. F., KOSTIKOV, V. I., and LEVIN, V. YA., Moscow
Institute of Steels and Alloys

"Impregnation of Compact Graphites With Melts of the System Silicon-Zirconium"

Moscow, Khimiya Tverdogo Topliva, No 1, Jan/Feb 71, pp 147-153

Abstract: The mechanism of impregnating graphites of the KPG (expansion unknown) class with liquid silicon had been studied previously. A dense composition of the type graphite-silicon -- carbide-silicon could be obtained in this way if one worked in oxidizing media and the temperature did not exceed the melting point of silicon; pure silicon always remained in the graphite pores. To avoid this disadvantage, alloys of silicon with some active element, which can interact with silicon and graphite, were used. In this case, it was found to be possible to bond the excess silicon which had not been changed into silicon-carbide, into some silicide. Two alloys were used in this study: Si+10% Zr and Si+ 25% Zr. The graphite sample was added to the respective melt in a corundum-lined crucible and kept in contact for the required time period. After the experiment, the Zr and Al contents in the melt were determined. It was found that the Zr stayed practically unchanged. The Al content in the melts did not exceed 0.1%. The impregna-
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USSR

YELYUTIN, V. P., et al., Khimiya Tverdogo Topliva, No 1, Jan/Feb 71, pp 147-153

tuon process could be divided into two parts: during the initial part (0-50 sec.), the impregnation depth depends on the square root of the time. With longer interaction times, i.e., $t > 50$ sec., surface diffusion of the atoms along the pore walls takes place. The mass transfer process was found to be described where t is the time and a and c are constants. Constants a and c as well as the rate of the impregnation process were calculated for three different HPG graphites at three different temperatures (1410, 1450, and 1550°C) treated with the two melts. It was found to be correct to consider the impregnation of graphite by the melts as a wetting process over the walls of the pores.

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-25 -

USSR

UIC 54.311-00.1

~~ANNIKH, E. I.~~, KOSTINOV, V. I., LEVIN, V. YA., and LNYCHENKO, G. M., Moscow
Institute of Steel and Alloys, Moscow, Ministry of Higher and Secondary Specialized
Education RSFSR

"Mechanism of Liquid Silicon Impregnation of Graphite"

Moscow, Khimiya Tverdogo Topliva, No 4, 1970, pp 143-146

Abstract: A study was made of impregnation of dense graphites MFG-5, MFG-6, and
MFG-3 (porosity of 12, 15, and 20%, respectively) with liquid silicon in the 1410-
1550° temperature range. The mass transfer process can be divided into two stages:
viscid flow of liquid silicon along graphite pores (0.50 seconds) with 11.5-14.2
kcal/mole energy of activation and superficial diffusion of silicon along walls of
graphite pores (50-180 seconds) with 45.0-53.2 kcal/mole energy of activation.

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1/2 010 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--EVALUATION OF AN AUTOMATIC PLATE AND FRAME FILTER PRESS WITH
MECHANIZED PLATE CLAMPING -U-
AUTHOR--ZAMBROVSKIY, V.A., ANIKEYEV, YU.V., TSYS, V.A., MUKHIN, I.L.
COUNTRY OF INFO--USSR
SOURCE--SAKH. PROM. 1970, 44(2), 22-7
DATE PUBLISHED-----70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, CHEMISTRY
TOPIC TAGS--FILTRATION, PRESS, CHEMICAL AGENT FILTER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/0155 STEP NO--UR/0339/70/044/002/0022/0027
CIRC ACCESSION NO--AP0103834
UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0103834

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN AUTOMATIC PLATE AND FRAME FILTER PRESS WITH A FILTERING AREA OF 2.5 M PRIME2 IS DESCRIBED AND ITS PERFORMANCE IN A SUGAR FACTORY UNDER VARIED OPERATING CONDITIONS IS DETAILED. A TYPICAL CYCLE OF 28 MIN CONSISTED OF LIQUOR FLOW 17.2, WATER WASH AND COMPRESSION 8.2, AND NONPRODUCTIVE (CLEANING) OPERATIONS 2.6 MIN. SUGAR LOSSES WERE REDUCED TO 0.7PERCENT; CAKES CONTG. 30PERCENT H SUB2 O WERE PRODUCED; BY THE USE OF A PERLITE FILTER AID, 65-8PERCENT DENSE SIRUPS WERE FILTERED AT 8.9 1.-M PRIME2-MIN.

UNCLASSIFIED

USSR

UDC 581.187

SHEVCHENKO, V. A., PYATISHEV, D. R., VASILEVA, E. N., and ANKHEIEVA, I. D.

"Application of the Sector Mutant Colonies Test in the Study of the Mutation Process in *Chlorella*"

Moscow, *Syulleten' Moskovskogo Obshchestva Ispytateley Prirody, Novaya Seriya, Otdel Biologicheskii*, Vol 75, No 3, May/Jun 70, pp 133-143

Abstract: The mutation process of *Chlorella vulgaris* (strain LAM-1) was studied by the method of sector mutant colonies. A synchronous culture of the algae in the pre-synthetic stage (young autospores) was exposed to the short-lived action of ethylenimine. Mixed mutant clones giving rise to sector colonies predominated over pure mutant clones. Study of the sector mutant colonies indicated an ordered spatial distribution of the daughter nuclei within the mother cells. This distribution was preserved in the solid nutrient medium after passage of the autospores from the mother cell. Ethylenimine induced mass formation of sectors of the aberrant types 3/3 and 5/3 and others that were present to only a minor extent after the action of X-rays or UV light on *Chlorella*. Formation of the aberrant types cannot be explained satisfactorily at this stage. The data obtained on the types of sectors and their quantitative distribution supported the hypothesis of the cyclic polytene nature of chromosomes in *Chlorella*.

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USSR

UDC 621.35.035.2

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ANISIMOV, R. I., and MAKRENKO, T. S.

"Study of the Kinetics During the Determination of Electrode Equilibrium in the System $\text{Fe}^{+2}/\text{Fe}^{+3}$ on a Platinum Electrode"

Nekotor. probl. kinetiki elektrod. processes (Some Problems in the Kinetics of Electrode Processes), Topic Books From the Dal'nevost University, Vladivostok, 1972, pp 92-95 (from Referativnyy Zhurnal -- Khimiya, No 8(II), 1973 Abstract No 8L212, by L. S. Kanevskiy)

Translation: An oscilloscope was used to study the kinetics of the interactions in the $\text{Fe}^{+2}/\text{Fe}^{+3}$ system with the de-gassed surface of a platinum electrode having different potentials. It was shown that the velocity of establishing the value of the oxidation reduction potential decreased with an increase in the potential of the electrode. It was assumed that the reason for this phenomena is related to the heterogeneity of the platinum electrode and presence on its surface of a large number of defects (ridges and peaks).

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- 30 -

1/2 015 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--INFLUENCE OF MIXING ON THE EFFECTIVENESS OF LIQUID ORGANIC COMPOUND
SEPARATION OF ZONE MELTING -U-

AUTHOR--(03)-AVRAMENKO, N.V., DUGACHEVA, G.M., ANIKIN, A.G.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(2), 356-9

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ZONE MELTING, ORGANIC CHEMISTRY, CHEMICAL COMPOUND, BENZENE,
HEPTANE, MATERIAL MIXING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/0446

STEP NO--UR/0076/70/044/002/0355/0359

CIRC ACCESSION NO--AP0121120

UNCLASSIFIED

USSR

UDC 619:614.94

ANIKIN, A. M., Senior Engineer, Main Administration for the Design of Rural Buildings and Installations, USSR Ministry of Agriculture

"Standard Model for Rayon Veterinary Stations"

Moscow, Veterinariya, No 8, 1971, pp 34-37

Abstract: The model station occupies an area of 0.93 hectares, with 1,682.4 m² consisting of buildings. One unit of the station includes the clinic building with an adjacent 10-stall hospital and a 5-stall isolation ward; a five-vehicle garage with an adjacent storeroom for disinfecting agents; and a boiler house, a 100 m³ water reservoir, and storage sheds for coal, ashes, food, and refuse. The rest is paved court equipped with a shed for incoming and outgoing animals and a loading ramp. The clinic building has a treatment room, an instrument washing and sterilization room, a pharmacy, a dispensary, a laboratory, a storeroom, a toilet, a shower room, two dressing rooms, offices for the director, veterinarians, and clerks, and a conference room in which regular and special lectures are also given. The whole unit is fenced, landscaped, and surrounded by a thick hedge. Architectural specifications are given. In addition to treating animals in the facilities, the station also renders in-field veterinary services, for which

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2/2 015

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121120

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SEPNs. OF LIQ. ORG. COMPOS. BY ZONE M. AT ROOM TEMP. WITH MIXING OF THE LIQ. ZONE WERE MADE USING THE APP. EMPLOYED FOR ZONE M. OF LOW M. COMPOS. MECH. MIXING OF THE COMPOS. WAS THE SAME AS THAT USED WITH ZONE MELTING OF SOLID ORG. COMPOS., WITH MIXING OF IMPURITIES, COMPARED WITH RESULTS WHEN THE LIQ. ZONE WAS NOT MIXED. ZONE M. OF BENZENE-N-HEPTANE WAS CARRIED OUT TO DET. THE OPTIMAL CONDITIONS OF SEPN. THE DEPENDENCE OF THE CONC. OF IMPURITIES IN BENZENE ON THE INTENSITY OF MIXING IN THE LIQ. ZONE WAS DISCUSSED. THE CORRESPONDING DEPENDENCE CURVE SHOWS A MAX. FURTHER INCREASING OF INTENSITY OF MIXING LEADS TO THE FORMATION OF HOMOGENEOUS CRYSTALS (I.E., A HIGHER PROBABILITY OF CAPTURE OF THE IMPURITIES). THE RESULTS WERE CONFIRMED BY CHROMATOGRAPHIC AND CRYOSCOPIC ANAL. FACILITY: KHIM. FAK., MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

"APPROVED FOR RELEASE: 08/09/2001. CIA-RDP86-00513R002200210003-1"

UNCLASSIFIED

USSR

UDC: 534.21:549

YEGOROV, B. N., KONDRATENKOV, V. I., and ANIKIN, I. N., Moscow

"Studying the Thermal Conductivity and the Coefficient of Linear Expansion of the Single Crystals of Synthetic Mica (Fluorophlogopite) and Natural Phlogopite"

Moscow, Teplofizika Vysokikh Temperatur, Vol 10, No 1, Jan-Feb 1972, pp 22-26

Abstract: The authors present the results from studying the anisotropy of the thermal conductivity of the single crystals of synthetic mica (fluorophlogopite) in the $\langle 001 \rangle$, $\langle 100 \rangle$, $\langle 010 \rangle$, and $\langle 110 \rangle$ orientations and within the 300-800°K range, and of the single crystals of natural mica (phlogopite and muscovite) in the $\langle 001 \rangle$ cleavage plane within the 300-600°K range. The coefficient of linear expansion of fluorophlogopite is studied in the $\langle 100 \rangle$ and $\langle 010 \rangle$ orientations within the 300-1100°K range. Several possible explanations are offered to explain the fact that λ_{100} of fluorophlogopite rises above 700°K and that of phlogopite rises above 600°K. Thermal conductivity anisotropy makes it possible to explain the frequently encountered rhombiform crystals of fluorophlogopite. Original article: one table, three formulas, three figures, and 11 bibliographic entries.

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USSR

USSR Pat. 1,451,200 (1979)

KALININ, I. P., KALININ, I. P., YAKOVLEV, I. B., and ANIKIN, I. N., Leningrad Technological Institute, Leningrad, 1979

"Production of Single-Crystal CdS and CdSe Film Under Conditions Close to Equilibrium"

Moscow, Izvestiya Akademii Nauk SSSR -- Neorganicheskiye Materialy, Vol 6, No 9, Sep 78, pp 1504-1507

Abstract: The article suggests a method for the synthesis of single-crystal CdS and CdSe films using vacuum condensation on orienting substrates (synthetic mica (fluorophlogopite) or leucosapphire) in a wide temperature range (300-800° C) under conditions close to thermodynamic equilibrium. The structure of epitaxial films of CdS and CdSe is no less perfect than single crystals (number of dislocations 10^{-2} - 10^{-3} cm⁻²). A study was made of the effect of process parameters on the degree of structure perfection of the CdS, CdSe epitaxial films and their electrical properties. The suggested method permits the growth of single-crystal CdS and CdSe films with a wide range of properties.

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USSR

KALININ, I. P., et al., Izvestiya Akademii Nauk SSSR -- Neorganicheskiye Materialy, Vol 6, No 9, Sep 70, pp 1564-1567

Conditions are described for the production of single-crystal CdSe films with a mobility of up to $180 \text{ cm}^2/\text{v. sec.}$ close to the properties of the single crystals. Perfect CdS and CdSe films with a resistivity of up to $10^7\text{-}10^9$ ohms per sec were synthesized. The method of reevaporation with chalcogene gives perfect high-resistance single-crystal CdS and CdSe films with a hole mobility of $0.8\text{-}2.4 \text{ cm}^2/\text{v. sec.}$

2/2

USSR

UDC: 621.396.6:621.315.61

LUDUPOV, Ts. Zh., IVANOV, V. F., ANIKIN, I. N., SHUMARINA, Ye. I.

"Dielectric Properties of Artificial Mica Along the Plane of Cleavage on Superhigh Frequencies"

Elektron. tekhnika. Nauchno-tekhn. sb. Materialy (Electronic Technology. Scientific and Technical Collection. Materials), 1970, vyp. 3, 52-57
(from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12V418)

Translation: The authors give the results of measurement of complex permittivity along the plane of cleavage parallel to crystallographic axes *a* and *b* in fluorophlogopite by a waveguide method in the millimeter and centimeter ranges. Artificial mica is investigated in the 20-200°C temperature range on a frequency of 10^{10} Hz. Resumé.

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1/2 020 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--FREQUENCY DEPENDENCE OF TAN SIGMA (DIELECTRIC LOSS MODULUS) OF
SYNTHETIC MICA -U-
AUTHOR--(02)--KULOIYEV, B.N., ANIKIN, I.N.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(2), 402
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, PHYSICS, EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--MICA, DIELECTRIC MATERIAL, DIELECTRIC LOSS, SYNTHETIC
MATERIAL, MINERAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1995/0212

STEP NO--UR/0363/70/006/002/0402/0402

CIRC ACCESSION NO--AP0115916

UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--0900T70
 CIRC ACCESSION NO--AP0115916
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SYNTHETIC MICA (OR
 FLUOROPHLOGOPITE) IS AN IMPORTANT HEAT AND ELEC. INSULATING MATERIAL.
 THERE ARE NO DATA IN THE LITERATURE ON THE FREQUENCY DEPENDENCE OF
 DIELEC. LOSSES IN SINGLE CRYSTALS OF THIS MINERAL WITHIN THE SONIC
 FREQUENCIES REGION. IT WAS POSSIBLE TO TRACE THE DISPERSION OF TAN
 SIGMA OF SYNTHETIC MICA AT 290DEGREESK BY MEANS OF A 1620-A GENERAL
 RADIO COMPANY HIGH FREQUENCY PRECISION BRIDGE. THE MEASUREMENTS OF TAN
 SIGMA IN THE (001) DIRECTION OF THE CRYSTAL WERE PERFORMED, WITHIN THE
 60 HZ-10 KHZ FREQUENCY RANGE. THE COMPN. OF THE INVESTIGATED MICA, AS
 SYNTHESIZED BY CRYSTN. FROM THE MELT IN FE CRUCIBLES, COULD BE EXPRESSED
 BY THE FORMULA: (K SUB0.96 NA SUB0.04) SUB1.00 MG SUB3 (SI SUB2.96 AL
 SUB1.03 FE SUB0.01 PRIME 3POSITIVE) SUB4.00-O SUB10.(F SUB1.07 O
 SUB0.03) SUB2.00. THE THICKNESS OF THE SAMPLES MEASURED WAS 70 MU, AND
 THEIR DIAM. WAS 10-30 MM. THE ELECTRODES WERE MOUNTED TO THE SAMPLES IN
 THE FORM OF SILVER PASTE AT 723DEGREESK. RESULTS SHOW THAT TAN SIGMA
 OF THE DIELEC. LOSSES FOR SYNTHETIC MICA IS UNUSUALLY SMALL AS COMPARED
 TO THE TAN SIGMA FOR NATURAL MICA, AND ACCORDING TO THE ORDER OF
 MAGNITUDE IT AMTS. TO 10 PRIME NEGATIVE6-10 PRIME NEGATIVES. FREQUENCY
 MAX. OF TAN SIGMA WERE OBSERVED FOR BOTH THE SYNTHETIC AND THE NATURAL
 MICA WITHIN THE RANGE INVESTIGATED. IT IS PROPOSED THAT THESE MAX. ON
 THE SONIC FREQUENCIES ARE CAUSED BY THE POLAR ORIENTATION OF THE MOLS.
 OF THE ADSORBED WATER. FACILITY: VSES. NAUCH.-ISSLED. INST.
 SIN. MINER. SYR'YA, ALLKSANDROV, USSR.

UNCLASSIFIED

USSR

UDC: 621.791.952:669.016.591.22:622.17

ANILIN, L. S. (Candidate of Technical Sciences), KHAVCHIK, G. A.,
DERGUNOVA, V. S. (Candidate of Technical Sciences)

"High-Temperature Strength of Joints of Graphite Materials"

Moscow, Svarochnoye proizvodstvo, No 1, Jan 72, pp 18-19

Abstract: Discussed is a method of joining graphite materials by the use of an intermediate carbide-forming interlayer. It is shown that the high-temperature strength of the brazed joint is a function of the interaction of the molten solder with the graphite, the depth of its penetration in the pores of the material, the newly formed phase composition, and the strength of the graphite. Comparison tests on graphite specimens bonded by a zirconium interlayer indicate that the strength of the brazed specimens heated above the melting temperature of zirconium is 30 to 35% higher than that of specimens heated below this temperature. The tensile strength of the brazed joints increases with the penetration depth of the solder up to a specific value (2-2.5 mm) and then remains constant. The failure which had occurred in the specimens in tensile tests at 2000°C was found to be

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USSR

ANIKIN, L. T. (Candidate of Technical Sciences), et al, Svarochnoye
proizvodstvo, No 1, Jan 72, pp 18-19

along the graphite outside the brazing zone. It is suggested that brazing
of large-pore graphite be done with solders capable of forming (on contact)
carbon saturated fusions under compression to afford maximum solder penetra-
tion and complete carburization to a composition close to stoichiometric.
The study includes test data on solders from hafnium, molybdenum, and
tungsten. (5 illustrations, 9 bibliographic references).

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- 17 -

1/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--CONCENTRATION HETEROGENEITY OF STEEL 110G13L CONTAINING NIOBIUM -U-
AUTHOR--(03)-ANIKIN, P.S., NOVOMEISKIY, YU.D., RASKOLENKO, L.G.
COUNTRY OF INFO--USSR
SOURCE--LITEINOE PROIZVOD. 1970, (3), 36-7
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--ALUMINUM, STEEL DEOXIDATION, NIOBIUM STEEL/01110G13L NIOBIUM
STEEL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/1926 STEP NO--UR/0128/70/000/003/0036/0037
CIRC ACCESSION NO--AP0132188
UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0132188

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF NB ADDNS. (0.15, 0.35, AND 0.65PERCENT) ON THE NONUNIFORMITY OF THE TITLE STEEL WAS STUDIED. THE STEEL WAS MELTED IN 120-KG INDUCTION FURNACE WITH BASIC LINING AND ALLOYED IN THE LADLE AFTER CAREFUL DEOXIDN. WITH AL. THE NONUNIFORMITY WAS EVALUATED BY DETG. MICROHARDNESS ON POLISHED SECTIONS PREPD. WITH MIN. COLD HARDENING. ABOUT 90-100 DETNS. WERE MADE ON ONE SECTION; GRAIN BOUNDARIES WERE EXCLUDED. THE DEGREE OF CONCN. UNIFORMITY WAS DETD. BY THE RATIO OF THE MAX. OF FREQUENCY CURVE TO THE WIDTH OF THE HISTOGRAM (FREQUENCY POLYGON). THE MAX. OF THIS RATIO (1.75) OCCURRED AT 0.35PERCENT NB, WHICH WAS THE RECOMMENDED NB ADDN.

UNCLASSIFIED

USSR

UTC 542.61:510.791.0'175

ROZEN, A. M., MARTINOV, B. M., and ANEKIN, V. I.

"Mechanism of the Extraction of Uranyl Nitrate with Organophosphorus Acids from Nitric Acid Solutions"

Leningrad, Radiokhimiya. Vol. 18, No 1, 1973, pp 24-30.

Abstract: The mechanism of interaction of uranyl nitrate with di-(2-ethylhexyl) phosphoric acid (I) during extraction of U(IV) from nitric acid solutions with I in CCl_4 was studied. It was shown that the extraction of U(IV) from solutions with HNO_3 concentrations $> 2.0 \text{ M}$ proceeded by an exchange solvate mechanism with the formation of the mixed complex $\text{UO}_2(\text{NO}_3)(\text{HR})_2$, where R is a di-(2-ethylhexyl)phosphate anion. The extraction constant K was 12,000; the pure solvate complex $\text{UO}_2(\text{NO}_3)_2 \cdot 2\text{HR}$ practically did not form. Extraction from weakly acidic solutions ($< 0.4 \text{ M}$) took place by the ion exchange mechanism $\text{UO}_2^{++} + 2(\text{HR})_2 \rightleftharpoons \text{UO}_2(\text{HR})_2 + 2\text{H}^+$ ($\lg D = K + 2 \text{ pH}$). K was 3100. An equation was derived which makes it possible to determine the distribution coefficient D of U(IV) in the entire range of acidities 0-9 M HNO_3 . In the extraction with I. The incorrect conclusions with respect to the composition of the complex extracted at acidities $> 2 \text{ N}$ that were made by other authors in previously

USSR

ROZEN, A. M., et al., Radiokhimiya, Vol 15, No 1, 1973, pp 24-30

published work can be ascribed to a disregard of changes in the activity coefficient of uranyl nitrate.

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1/2 030 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--FAT METABOLISM IN PATIENTS WITH HYPOTHYROIDISM DURING TREATMENT
WITH LIOTHYRONINE DIHYDROCHLORIDE -U-
AUTHOR--ANIKIN, V.V. *A*
COUNTRY OF INFO--USSR
SOURCE--PROBL. ENDOKRINOL. 1970, 16(2), 29-31
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--THYROID GLAND, ENDOCRINE SYSTEM DISEASE, FAT, METABOLISM,
BLOOD CHEMISTRY, CHOLESTEROL, LIPID, LIPOPROTEIN, DRUG TREATMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/0598 STEP NO--UR/0502/70/016/002/0029/0031
CIRC ACCESSION NO--AP0117826
UNCLASSIFIED

2/2 030 UNCLASSIFIED PROCESSING DATE--16OCT70
CIRC ACCESSION NO--AP0117826
ABSTRACT/EXTRACT--(U) GP-U- ABSTRACT. LEVELS OF CHOLESTEROL, TOTAL
LIPIDS, AND LIPOPROTEINS IN BLOOD BEFORE AND DURING THE TREATMENT WITH A
NEW PREPN. OF TRIIODOTHYRONINE, LIOTHYRONINE 2HCL, IN 35 PATIENTS WERE
DETD. POS. THERAPEUTIC RESPONSE TO LIOTHYRONINE HCL WAS OBSERVED WITHIN
7 DAYS OF TREATMENT EVEN IN PATIENTS WHO WERE RESISTANT TO TREATMENT
WITH THYROXINE. ALONG WITH THE REDN. OF THE CLIN. MANIFESTATIONS OF
HYPOTHYROIDISM, LEVELS OF CHOLESTEROL, TOTAL LIPIDS, AND BETA ALPHA
LIPOPROTEINS RATIO IN BLOOD WERE NORMALIZED. FACILITY: KALININ,
MED. INST., KALININ, USSR.

UNCLASSIFIED

Physical Properties

USSR

UDC 541.12.012.3

YATSEV, S. P., and ANIKIN, M. A., Ural Scientific Research Chemical Institute, Sverdlovsk

"Solubility of Group-Five Metals in Molten Gallium"

L'vov, Fiziko-Khimicheskaya Mekhanika Materialov, No 3, May-June 78, pp 57-62

Abstract: Inasmuch as liquidus curves for gallium-metal systems have not been established or need refinement, the authors made a study of the solubility of Cr, Y, Zr, Nb, Mo, Pd, Cd, Ru, Al, Sb, and Te in molten Ga in relation to temperature at concentrations of these metals not greater than 2 at. %. A description is given of the procedure and apparatus used to determine liquidus lines, and attention is given to the chemical thermodynamics involved in determining solubility within Ga-Metal binary systems.

In plotting solubility curves for the studied metal combinations as T/T_m , melting points and heat of sublimation were compared with the group number in the periodic table and it was observed that there was some disparity in the position of a solubility curve with given thermodynamic properties. Antimony and tellurium did not conform to the relationship. The plotted data also revealed the lack of a correlation between the solubility of metals in gallium and the atomic size factors. It was deemed probable that electron interaction in the molten state

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USSR

YATSEIKO, S. P., and ANIKIN, M. A., Fiziko-Khimicheskaya Mekhanika Materialov, No 3, May-June 70, pp 57-62

suppressed the size factor.

In passing from strontium and yttrium to niobium, solubility in gallium is reduced, whereas solubility increases to large values for adjacent indium in the periodic system and is sharply diminished for antimony and tellurium. This conformity was not reflected by molybdenum, whose solubility in gallium is significantly greater than niobium and ruthenium.

Literature data on the solubility of metals of the fourth group in molten, mercury, bismuth, and plutonium show a distinct correlation between solubility curves for metals in the fourth and fifth groups in molten gallium. Data collected in the current tests on the solubility of metals in the fifth group in molten gallium make it possible to assume that such characteristics as melting point, heat of melting, heat of sublimation, size factor, partial molar entropy, and heat of mixing are all important but do not complete the total list of properties affecting solubility. Thus, one must also consider the electron structure and the charge of the atomic nucleus, on which depend all the other properties of both metals and their solutions.

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Luminescence

USSR

1983-1984

ANTIKINA, L. P., KASHCHAY, V. V., BORODINUSKAYA, L. S., KASHCHAY, Ya. A.,
SARYAKIN, A. V., VIKTOROVICH, A. Z., NIKITINA, N. S., POLEK, P. S., YAKOVLEV,
Yu. V.

"Luminescent Determination of Gadolinium, Europium and Samarium as Impurities
in Metallic Uranium"

Moscow, Zhurnal Analiticheskoy Khimii, Vol XX, No 7, pp 1031-1034

Abstract: A quantitative luminescent method of analyzing gadolinium, europium and samarium impurities in metallic uranium is described. A large part of the uranium was separated by a chromatographic method, passing uranyl sulfate in 1 N H₂SO₄ through a column with Kall-2 cation-exchanger. The rare-earth element impurities remaining in the column were washed out by 1-4 N HCl. It was established photometrically with the application of uranine III that an unacceptable high amount of uranium (~ 0.04 percent from a weighed sample of 10 grams of uranyl sulfate) was washed into the eluate, making necessary the development of additional methods for separation and determination of the rare-earth elements. Luminescent screens were then used. Gadolinium, europium and samarium in metallic uranium were analyzed by the radiation spectra of its monomers based on Y₂O₃ for gadolinium and YVO₄ for europium and samarium. The rare-earth elements were concentrated chromatographically, and the luminescence was spark-excited. A photomultiplier was used to measure the spectra. The sensitivity of analysis is 10⁻⁴.

ANIKINA, I. I., et al., Zhurnal Analiticheskoy Khimii, Vol XX, No 7, pp 1014-1016,

gadolinium, europium and samarium was $2 \cdot 10^{-5}$ percent, and the variation factor was 30 percent. The method permits quantitative determination of the indicated rare-earth elements from a weighed sample of up to 1 gram of uranium. As a control, the additive method was used. Gadolinium, europium and samarium were introduced in the amounts of $2 \cdot 10^{-5}$ and $5 \cdot 10^{-5}$ percent after decomposition of the metal uranium by nitric acid. An analysis flow chart and sample luminescence spectra are given in the article.

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USSR

UDC 621.387

BELYAYEV, V.P., HUDYAN, N.P., ANIKINA, N.M., NEGIPEVA, L.V.

"Recovery Time Of Discharger With Discharge Gap Shifted To The Wall Of A Waveguide"

Elektron.tekhnika. Nauch.-tekhn.sb. Elektron. SVCh (Electronics Technology. Scientific-Technical Collection. Microwave Electronics). 1972, Issue 4, pp 108-109 (from RZh:Elektronika i yeye primeneniye, No 9, Sept 1972, Abstract No 9A193)

Translation: It is established that with the shift of the discharge gap of a discharger to the wide wall of a waveguide, the recovery time is decreased in the case where the discharger is filled with electrically negative gas and increased when it is filled with electrically positive gas. Summary.

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USSR

UDC 616.981.553-092.9-085.373.3

GOLOSOVA, T. V., ANIKINA, T. P., and PIVEN', I. N., Central Institute of Hematology and Blood Transfusion, Moscow

"The Therapeutic Effectiveness in Experimental Botulism of Hyperimmune Homologous Plasma of Directed Action"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 8, Aug 73, pp 115-118

Abstract: In experiments conducted on rabbits, hyperimmune homologous plasma was obtained by injecting to the animals botulin tritoxoid three times subcutaneously with intervals of 21 days, and then repeating the inoculation 6-9 mos. later. The plasma derived from the immunized rabbits was used for the treatment of rabbits poisoned with 3 LD₅₀ of type A Cl. botulinum toxin. A pronounced therapeutic effect was obtained on application of the homologous plasma in doses 30-150 times smaller than those of heterogeneous sera which are commonly applied clinically. As indicated by the complement activity, lysocyme titer, and phagocytosis, the non-specific immunity depressed by the toxin was restored within 1-2 weeks after the beginning of treatment.

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USSR

UDC 621.375.92

MIKAEL'YAN, A. L., ANIKINA, Ye. B., MINAYEV, V. P., TURKOV, Yu. G.

"Single-Mode Ruby Laser With Ring Resonator"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works). No. 1, Moscow, 1971, pp 136-139 (from RZh-Fizika, No 7, Jul 71, Abstract No 7D1043)

Translation: A single-mode ruby ring laser operating in a free generation mode was investigated. The laser was used to record holograms on "Mikrat-VR" film and on thin metal films. Authors abstract.

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USSR

UDC: 621.373:530.145.6

MIKAELIAN, A. L., ANIKINA, Ye. B., MINAYEV, V. P., TURKOV, Yu. G.

"A Single-Mode Ruby Laser With Ring Cavity"

V sb. Kvant. elektronika (Quantum Electronics--collection of works), No 1, Moscow, 1971, pp 136-139 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D183)

Translation: The paper presents the results of a study of a single-mode ruby ring laser which operates in the free emission mode. The laser is used for recording holograms on "Mikrat-VR" film and thin metal films. Four illustrations, bibliography of six titles. Resumé.

1/1

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USSR
MATHEMATICS
Differential & Integral Equations

UDC 517.9

USSR

ANIKONOV, YU. YE., Computer Center, Siberian Department, Academy of Sciences,
USSR

"Uniqueness of the Solution of First-Order Integral Equations"

Moscow, Matematicheskkiye Zametki, October 1973, pp 493-498

Abstract: This paper deals with multivariate, first-order integral equations with kernels that possess characteristics on the diagonal, or have this property after repeated differentiation. Two theorems are proven to show that such equations have not more than one solution. 1 reference.

1/1

USSR

UDC: 620.195.7

GORELIK, B. N., and AMERONOVA, Ye. A., State Scientific Research and Planning Institute of Mineral Pigments

"Effect of Lead as the Contacting Metal on the Corrosion of Stainless Steels and Titanium"

Moscow, Mashinits Metallov, Vol. 6, No. 4, Jul-Aug 70, pp 410-414

Abstract: The occurrence of corrosion instability of stainless steel in nitric acid solution is described, the phenomenon is explained, and a method for eliminating corrosion is proposed. The study shows that the effect of the contacting metal on the corrosion behavior of stainless steel is governed primarily by the former's capacity to change the stationary potential of the steel in the medium (involved), which strongly depends on the metal's polarizability. The greatest threat lies in contact with low-polarizing metals which impose their stationary potential upon the system. In contact with stainless steel the dissolution rate of nickel in 4% nitric acid is little affected, it increases for lead, and increases for zinc. Unlike HNO_3 , in 4% solutions of HCl and H_2SO_4 stainless steel dissolves in the active state: the electrode potential at $20^\circ C$ is -0.12 and $+0.09$ v, respectively, the dissolution rate at $95^\circ C$ is 110 and 35 $gm/m^2 \cdot hr$. Here, the contact with lead moving the steel's potential toward more negative values

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GORELIK, G. N., et al, Zashchita Metallov, Vol 6, No. 4, Jul-Aug 70, pp 418-419
(-0.25 and -0.23 v) and, in conformity with regularities of electrochemical
kinetics, leads to a lower dissolution rate (to 3.3 and 5.0 gm/m².hr).

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AA0044811- ANIKST D.A.

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

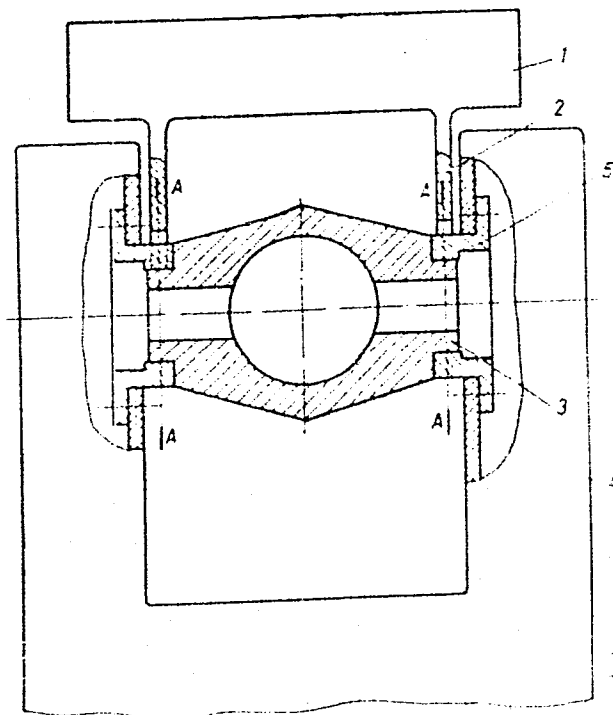
243846 OPTICAL THEODOLITE primarily designed for measuring horizontal and vertical angles in triangulation and polygonometry of 2-nd order, astronomic definitions of 3 and 4th order, and engineering work including erection of plumb lines. The special characteristic of the suggested optical theodolite lies in the camps are in the form of a stepped sleeve bring out the support of the instrument's telescope in the space between the columns. Such a construction enables to use the instrument not only for measuring angles, but also for engineering work and astronomical observations.

28.9.67 as 1137730/18-10. G.G. GORDON & D.A. ANIKST.
GEODESY, AERIAL PHOTOGRAPHY & CARTOGRAPHY RES. INST.
(30.9.69) Bul 17/14.5.69. Class 42c. Int.Cl.G 01c.

Tsentral'nyy Nauchno-Issledovatel'skiy Institut Geodezii,
Aerofotos"emki i Kartografii

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UDC 629.12:539.4.109

ANIK'YEV, I. I., VOROTNIKOVA, M. I., KONONENKO, V. O. (Kiev), Institute of Mechanics, Academy of Sciences, Ukrainian SSR

"Some Experimental Results With Regard to the Action of a Lateral Snock Wave in Water Upon Cylindrical Shells"

Kiev, Prikladnaya Mekhanika, Vol 7, No 9, September 1971, pp 100-109

Abstract: In the article are set forth the experimental results on a study of the process of deformation under the action of an unsteady lateral load on cylindrical shells of fiberglass-reinforced plastic and stainless steel. The shell under investigation, hermetically sealed by two fiberglass-reinforced plastic bottoms and weighted with loads such that the entire system has zero buoyancy, is placed in a working basin (a water-filled cylindrical tank). It is noted that the stability loss of the fiberglass-reinforced plastic shell takes place simultaneously in several different forms, and that the maximum deformation of the shells develops over a time which is several times longer than the time it takes for the wave front to traverse a distance equal to the shell diameter. 3 figures. 3 references.

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UDC 681.32:31

ANTLOV, V. M., BORISOV, M. S., VLASOV, F. S., YEREMIN, A. T., MONAKHOV, G. D.,
and ROMYANTSEV, V. I.

"Computer Complex"

USSR Authors' Certificate No 308430, Cl. G 06 f 15/16, filed 20 Apr 70,
published 12 Aug 71 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya
Tekhnika, No 5, May 72, Abstract No 5B30P)

Translation: Special-purpose computer complexes are known which contain a set of digital computers with interlinking units, with synchronization of synchronous series of machines and coupling lines between the digital computers of the complex, which assure correction of data errors occurring as a result of machine malfunctions. However, the amount of time and hardware redundancy used for increasing reliability and for organization of input data averagings in these complexes is considerable. In addition, parallel operation of the machines of the set is impossible in the event that it is necessary to raise the productivity of the computer complex by lowering its reliability. The unique feature of the proposed special-purpose complex is that the output data, address, and control lines of each section into which each computer of the complex is divided are assembled in each machine via assembly circuits into data, address, and control mainlines, which are connected to the inputs of the

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ANILOV, V. M., et al., USSR Authors' Certificate No 306430

intersectional coupling units of all machines of the set; the output data, address, and control lines of the intersectional coupling unit of each machine of the complex are connected to the data, address, and control inputs of the functional sections of the corresponding computer of the complex. Another unique feature of the special-purpose computer complex is the fact that the intersectional coupling unit of each machine of the complex contains "m" out of "n" (where $n > m$) majority circuits, majorizing inhibit gates, by-pass gates, assembly circuits, and a control register with a control signal generating circuit: the mainline of each machine of the complex being connected to the majority circuit input, through the majorizing inhibit gate to the first assembly input, and through the by-pass gate to the additional assembly input, the control inputs of the gates coupled by control lines to the corresponding outputs of the control circuit, which is connected to the control register output. This makes it possible to reduce the time and hardware redundancy for increasing reliability, provide averaging of input data, and organize parallel operation of the machines of the complex.

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1/2 028 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--AUTOMATIC DECIPHERING OF THE ELECTROCARDIOGRAM -U-
AUTHOR--ANIN, YU.L., GALPERINA, A.I., KOGAN, I.V., PEGANOVA, L.V.
COUNTRY OF INFO--USSR
SOURCE--VRACHEBNOYE DELO, 1970, NR 3, PP 94-97
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ELECTROCARDIOGRAPHY, HEART DISEASE, COMPUTER MEDICAL DIAGNOSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1986/0966 STEP NO--UR/0475/70/000/003/0094/0097
CIRC ACCESSION NO--AP0102905
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0102905

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A ATTEMPT IS PRESENTED OF USING
ELECTRONIC COMPUTING DEVICES FOR DECIPHERING OF ELECTROCARDIOGRAPHIC
RECORDS.

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UDC 577.1:615.7/9

BURKATSKAYA, YE. N., OSTROUKHOVA, V. A., KARPENKO, V. N., ANINA, I. A., OLEFIR, A. I.

"Characteristic Features of the Reactions of the Organism under the Prolonged Effect of Various Classes of Chemicals"

V sb. Nauch. osnovy sovrem. metodov gipiyen. normirovaniya khim. veshchestv v okruzhayushchev srede (Scientific Principles of Modern Methods of Hygienic Normalization of Chemicals in the Environment -- collection of works), Moscow, 1971, pp 135-141 (from RZh-Biologicheskaya Khimiya, No 14, Jul 72, Abstract No 14F2050)

Translation: On the basis of a study of the effect of organochlorine and organophosphorus and carbamate pesticides (experiments on rats) on certain biochemical systems of the organisms, the morphological composition of the blood and the immunological reactivity, it is considered that during hygienic normalization of chemicals as integral tests, the biochemical, hematologic and immunologic indexes can be used.

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1/2 027 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--THE EFFECT OF DINITROPHENOL AND CARBAMIC ACID DERIVATIVES ON
OXIDATIVE PHOSPHORYLATION AND SOME ASPECTS OF THE NUCLEINIC -D-
AUTHOR-(02)-BURKATSKAYA, YE.N., ANINA, I.A.

COUNTRY OF INFO--USSR

SOURCE--GIGIYENA TRUDA I PROFESSIONAL'NYYE ZABOLEVANIYA, 1970, NR 5, PP
39-41
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ORGANIC NITROGEN COMPOUND, BENZENE DERIVATIVE, CARBAMATE,
PHOSPHORYLATION, OXIDATION, NUCLEIC ACID, METABOLISM, RNA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/0694

STEP NO--UR/0391/70/000/005/0039/0041

CIRC ACCESSION NO--AP0117919

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0117919

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ACTION OF DINITROPHENOL COMPOUNDS AND CARBAMIC AND THIOCARBAMIC ACIDS DERIVATES ON THE PROCESSES OF OXIDATIVE PHOSPHORYLATION WAS STUDIED. BOTH GROUPS OF SUBSTANCES WERE FOUND TO UPSET THE ENERGY METABOLISM, THE ORIENTATION OF CHARGES, HOWEVER, BEING DISSIMILAR, SINCE DINITROPHENOLS DISSOCIATE OXIDATION AND PHOSPHORYLATION. CARBAMIC COMPOUNDS, ON THE OTHER HAND, ACT SPECIFICALLY ON THE NUCLEINIC AND PROTEIN METABOLISM, THIS MANIFESTING ITSELF BY AN INCREASED ACTIVITY OF ENZYMES STEMMING FROM DISINTEGRATION OF NUCLEINIC ACIDS AND BY A COMPENSATORY INTENSIFICATION OF THE RNA SYNTHESIS (IN ACUTE TESTS). LIABLE TO CHANGE ARE ALL RNA FRACTIONS, INCLUDING LOW HIGH POLYMERIC AND NUCLEAR ONES. UNDER THE EFFECT OF CARBAMATES INCORPORATION OF THE RADIOACTIVE METHIONINE IN THE LIVER PROTEINS BECOMES MORE INTENSIVE. FACILITY: INSTITUT GIGIYENY TRUDA I PROFZABOLEVANIY.

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